



Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel. (909) 590-1828 Fax (909) 590-1498

May 9, 2002

SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Suite 212
San Diego CA 92127

Dear Yu,

This package contains samples in our Service ID 02-2625 and your project is 00HW019 JPL.
Enclosed please find:

- (1) One original report.
- (2) One original Chain of Custody.
- (3) One diskette containing EDD Deliverable.
- (4) One original of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,



Kevin Xie, Ph.D.,

QA/QC Director

Applied P & Ch Laboratory

APCL Analytical Report

Submitted to:

SOTA Environmental

Attention: Yu Zeng

16835 W. Bernardo Dr, Ste. 212

San Diego CA 92127

Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-022625

Received: 04/25/02

Collected by: JNT/TAM

Extracted: N/A

Collected on: 04/25/02

Tested: 04/26-05/02/02

Reported: 05/03/02

Sample Description: Water from Pasadena, CA

Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result	
				ER-4	MW-4-1
				02-02625-1	02-02625-2
Dilution Factor				1	1
PERCHLORATE	E314	µg/L	4	<4	<4
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	0.3J	0.4J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-4-2	MW-4-3	TB-4
				02-02625-3	02-02625-4	02-02625-7
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	<4	<4	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	0.7	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	-	1.7	-
METHYLENE CHLORIDE	524.2	µg/L	1	0.3J	0.4J	0.9J
TETRACHLOROETHENE	524.2	µg/L	0.5	1.0	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	1.3	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				ER-4 02-02625-1	MW-4-1 02-02625-2	MW-4-2 02-02625-3
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-4-3 02-02625-4	MW-4-4 02-02625-5	MW-4-5 02-02625-6
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,



Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-2625

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-4	02-02625-7
MW-4-5	02-02625-6
MW-4-4	02-02625-5
MW-4-3	02-02625-4
MW-4-2	02-02625-3
MW-4-1	02-02625-2
ER-4	02-02625-1

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),

7196 (Chromium (VI)),

E314 (Perchlorate, low level),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

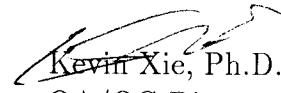
None.

6. Anomaly

None.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,


Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVR. TECH INC.

Contact: MIKE SAYRE

Tel # 858-485-8100 Fax #: 858-485-0812

Address: 16835 WEST BERNARDO DRIVE #212

City: SAN DIEGO

State: CA

Zip code: 92127

Bill to: SOTA

Project Name/Code JPL

Job # 00HW019 P.O. #

Project Address PASADENA, CALIFORNIA

APCL Quotation #

Due Date: ☒ Regular ☐ Rush: ___ days ___ hours

Sampled by: JNT/TAM

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis Items	Remarks
TB-4	TRIP BLANK	4/25/02 0958	WATER	HCl	2	PERMANENT (3/40) Cr VI (7/96) TOT Cr (200.8) VOCs (524.2)	White - With report Yellow - Lab copy Pink - Originator LEVEL IV DATA PACKAGE
MW-4-5	MW-4-5	1020		HNO3	1	X	
MW-4-5	MW-4-5	1020			1	X	
MW-4-4	MW-4-4	1059		HNO3	1	X	
MW-4-4	MW-4-4	1059			1	X	
MW-4-3	MW-4-3	1125		HCl	3	X	
MW-4-3	MW-4-3	1125		HNO3	1	X	
MW-4-3	MW-4-3	1125			1	X	
MW-4-2	MW-4-2	1159		HCl	3	X	
MW-4-2	MW-4-2	1159		HNO3	1	X	
MW-4-2	MW-4-2	1159			1	X	
MW-4-1	MW-4-1	1226		HCl	3	X	
MW-4-1	MW-4-1	1226		HNO3	1	X	
MW-4-1	MW-4-1	1226			1	X	

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEBSA (E, C or D); ☐ Other (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for ___ days after receiving date. If not specified, samples will be discarded 45 days after samples are received.

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # ___ Temperature: ☐ Room ☒ Cold (___ °C).

Relinquished by *[Signature]* Date/Time 4/25/02 1555 Received by *[Signature]* Date/Time 4/25/02 1555

Relinquished by *[Signature]* Date/Time 4/25/02 1710 Received by *[Signature]* Date/Time 4/25/02 1710

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino, CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENVR. TECH INC.

Address: 16835 WEST BERNARDO DRIVE #212 City: SAN DIEGO

Bill to: SOTA

Contact: MIKE SAYRE

Tel #: 858-485-8100 Fax #: 858-485-0812

State: CA

Zip code: 92127

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis Items	Remarks
TB-4	TRIP BLANK	4/25/02 0958	WATER	HCl	2	NOVIRUS (3/4) COT (4/6) COT (200.8)	White - Wash report Yellow - Lab copy Pink - Originator
MW-4-5	MW-4-5	1020		HNO3	1	X	LEVEL IV
MW-4-5	MW-4-5	1020			1	X	DATA PACKAGE
MW-4-4	MW-4-4	1059		HNO3	1	X	
MW-4-4	MW-4-4	1059			1	X	
MW-4-3	MW-4-3	1125		HCl	3	X	
MW-4-3	MW-4-3	1125		HNO3	1	X	
MW-4-3	MW-4-3	1125			1	X	
MW-4-2	MW-4-2	1159		HCl	3	X	
MW-4-2	MW-4-2	1159		HNO3	1	X	
MW-4-2	MW-4-2	1159			1	X	
MW-4-1	MW-4-1	1226		HCl	3	X	
MW-4-1	MW-4-1	1226		HNO3	1	X	
MW-4-1	MW-4-1	1226			1	X	

QC Requirement: ☐ Irregular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data; ☐ CLP; ☐ ACB; ☐ APCDE; ☐ NEESA; ☐ (E, C or D); ☐ Other (Please specify)

Sample Disposal: ☐ Return; ☐ Disposal by APCL; ☐ Hold for _____ days after receiving date. If not specified, samples will be discarded 45 days after samples are received.

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____

Relinquished by [Signature] Date/Time 4/25/02 1555 Received by Meg [Signature] Date/Time 4/25/04 1555

Relinquished by [Signature] Date/Time _____ Received by _____ Date/Time _____

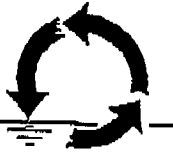
Temperature: ☐ Room ☐ Cold

APCL USE ONLY Service # _____

Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

APCL Form 6-10, Ver. 4.0, Dec. 20, 1994.

SOTA

Environmental Technology, Inc.

16835 W. Bernardo Dr., Suite 212
San Diego, CA 92127-1813Phone: 858-485-8100
Fax: 858-485-0812

Transmittal

Date: 4/26/02

Kenny Chan

To: 909-590-1498

From: Yu Zeng

FAX:

Phone:

No. of Pages: 2

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ as Requested

Subject:

Enclosures:

COC

Comments:

*Kenny**Please delete the extra analysis for perchlorate
for MW-4-4 and MW-4-5.**Thanks**Yu*



Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

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May 15, 2002

SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Suite 212
San Diego CA 92127

Dear Yu,

This package contains samples in our Service ID 02-2647 and your project is 00HW019 JPL.
Enclosed please find:

- (1) One original report.
- (2) One original Chain of Custody.
- (3) One diskette containing EDD Deliverable.
- (4) One original of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,


Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:

SOTA Environmental

Attention: Yu Zeng

16835 W. Bernardo Dr, Ste. 212

San Diego CA 92127

Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-022647

Collected by: JNT/TAM

Collected on: 04/26/02

Received: 04/26/02

Extracted: N/A

Tested: 04/26-29/02

Reported: 05/08/02

Sample Description: Water from Pasadena

Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-13	MW-16	MW-16D	TB-13/16
				02-02647-1	02-02647-2	02-02647-3	02-02647-4
CHROMIUM (VI)	7196	mg/L	0.01	0.037	<0.01	<0.01	-
Dilution Factor				2	50	50	1
PERCHLORATE	E314	µg/L	4	189	2,880	2,910	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	6.2	8.9	9.9	<0.5
CHLOROFORM	524.2	µg/L	0.5	2.6	10.7	11.7	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	0.8	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	0.9	1.2	1.3	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	-	-	-	0.7J
TETRACHLOROETHENE	524.2	µg/L	0.5	1.4	0.4J	0.5J	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	4.3	1.5	1.8	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	0.8	0.3J	0.3J	-
1,1,2,2-TETRACHLORO-1,2,2,2-TETRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit.

MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

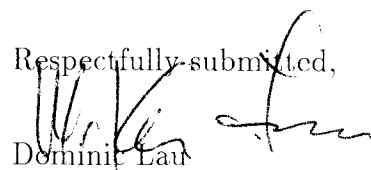
N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,


Dominic Lau

Laboratory Director

Applied P & Ch Laboratory

Case Narrative

Project: JPL/Pasadena/00HW019

For SOTA Environmental

APCL Service No: 02-2647

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-13/16	02-02647-4
MW-13	02-02647-1
MW-16	02-02647-2
MW-16D	02-02647-3

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),

7196 (Chromium (VI)),

E314 (Perchlorate, low level),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

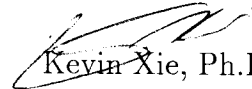
None.

6. Anomaly

None.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,


Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: SOTA ENVR. TECH INC.

Contact: MIKE SAYRE

Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 WEST BERNARDO DRIVE #24 City: SAN DIEGO State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code JPL

Job # 004W019 P.O. #

Project Address PASADENA, CALIFORNIA

APCL Quotation #

Due Date: ☒ Regular ☐ Rush: days hours

Sampled by: JNT/TAM

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis Items	Remarks
TB-13/16	TRIP BLANK	4/26/02	WATER	HQ	2	VOCS (524.2)	LEVEL IV
MW-13	MW-13	1044		HQ	3	Cr VI (7196)	DATA PACKAGE
MW-13	MW-13	1044		HN03	1		
MW-13	MW-13	1044		—	1		
MW-16	MW-16	1255		HQ	3		
MW-16	MW-16	1255		HN03	1		
MW-16	MW-16	1255		—	1		
MW-16D	MW-16D	1255		HQ	3		
MW-16D	MW-16D	1255		HN03	1		
MW-16D	MW-16D	1255		—	1		

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEBSA (E, C or D); ☐ Other (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for days after receiving date. If not specified, samples will be discarded 45 days after samples are received.

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # Temperature: ☐ Room ☐ Cold (°C).

Relinquished by Date/Time 4/26/02 1417 Received by Date/Time 4/26/02 1417

Relinquished by Date/Time Received by Date/Time

APCL USE ONLY Service #

Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

Sample Receiving Checklist

APCL ServiceID: **2647**Client Name/Project: Sota

1. Sample Arrival

Date/Time Received 4/26/02 1417Date/Time Opened 4/26/02 1417By (name): Kun

Custody Transfer:



Client



Golden State



UPS



US Mail



FedEx



APCL Empl: _____

2. Chain-of-Custody (CoC)



With Samples?



Faxed?



Client has Copy?



Signed, dated? By: _____



Project ID?



Analyses Clear?



Hold Samples?



#on Hold _____

# Received 4

CoC/Docs Zip-Locked under lid?



Compos. #: _____



#Samples OK?



Discrepancies?



Client notified?



Response (attach docs): _____

3. Shipping Container/Cooler

Cooler Used? # of 1

Cooled by:



Ice



Blue Ice



Dry Ice



None

Temp °C 4.2

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal?



Absent



Intact



Tampered?

4. Sample Preservation



pH <2



pH >12

If Not, pH = _____

Preserved by:



Client



APCL



Third Party _____

5. Holding-time Requirements



pH 24hr



BACT 6/24hr

Cr^{VI} 24hrNO₃⁻ 48hr

BOD 48hr

Cl₂ ASAP

Turbidity 48hr



DO ASAP



Fe(II) ASAP



HT Expired?



Client notified?

6. Sample Container Condition



Intact?



Broken?



Documented?

Number: _____

Type:



plastic



glass



Tube: brass/SS



Tedlar Bag



Quantity OK?



Leaking?



Anomaly?



Caps tight?



Air Bubbles?



Anomaly?

Labels:



Unique ID?



Date/Time



Preserved?

7. Turn Around Time

RUSH TAT: 5 days

Std (7-10 days)



Not Marked

8. Sample Matrix

Drinking H₂O

Other Liq



Soil



Wipe



Polymer



Air



Other: _____

Ground H₂O

Sludge



Filter



Oil/Petro



Paint



W. Water



Extract



Unknown

9. Pre-Login Check List Completed & OK?



ALL OK? (if not, attach docs)



Client Contact? (Name: _____) Date/Time: _____

Received/Checked by: Kun

Date: 26 Apr 2002

Time: 9:04 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.textfiles]smprcl.tex.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

02-02647 (1288_ 352) (4858100_ 352)

04/26/02

Part 1: General Information

☐ Company Information	Name:	SOTA Environmental
	Address:	16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127
☐ Project Information	Project Description:	JPL
	Project #:	00HW019
☐ Billing Information	P.O. #:	
	Bill Address:	16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127
	Lab Project ID:	2002-0002
	Client Database #:	01
☐ Receiving Information	Who Received Sample?	Kenny
	Receiving Date/Time:	04/26/02 1417
	COC No.	
☐ Shipping Information	Shipping Company	by Client
	Packing Information:	Cooler/Ice Chester
	Cooler Temperature:	4.2 °C
☐ Container Information	Container Provider:	Client
☐ Sampling Information	Sampling Person:	
	Sampling Company:	Client
☐ Turn-Around-Time Option:		Rush 5 working day(s)
☐ QC Option:		NEESA D
☐ Disposal Option:		Not specify

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont- tainer	Preser- vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	TB-13/16	524.2	02-02647-4	W	V	C	40	2	G	042602	N	0	7	☐
2	MW-13	524.2	02-02647-1- α	W	V	C	40	3	G	042602	N	0	7	☐
	MW-13	CRVI/Perch	02-02647-1- β	W	P		500	1	G	042602	N	0	7	☐
3	MW-16	524.2	02-02647-2- α	W	V	C	40	3	G	042602	N	0	7	☐
	MW-16	CRVI/Perch	02-02647-2- β	W	P		500	1	G	042602	N	0	7	☐
4	MW-16D	524.2	02-02647-3- α	W	V	C	40	3	G	042602	N	0	7	☐
	MW-16D	CRVI/Perch	02-02647-3- β	W	P		500	1	G	042602	N	0	7	☐

Part 3: Analysis Information

Test Items:

☒ 524.2	Volatile Organic Compounds
☒ 7196	Chromium (VI)
☒ 300.0	Perchlorate, low level
☐ 200.7/6010	Sodium, Na, by ICP
☐ 200.7/6010	Potassium, K, by ICP
☐ 200.7/6010	Calcium, Ca, by ICP
☐ 200.7/6010	Magnesium, Mg, by ICP
☐ 200.7/6010	Iron, Fe, by ICP
☐ 300.0	Sulfate (SO_4^{--}), by IC
☐ 300.0/SM4500NO $_3$	Nitrate (NO_3^-) as N by IC
☐ 300.0	Chloride Cl^- by IC
☐ SM2320B	Carbonate
☐ SM2320B	Bicarbonate
☐ 9040/150.1	pH
☐ 160.1	Solids, Total Dissolved (TDS)
☐ 206.2/7060	Arsenic, As, by GFAA
☐ 310.1	Alkalinity
☐ PAH-SIM	PAH (NOAA)

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE
1	TB-13/16	524.2	02-02647-4	W	X							☐
2	MW-13	524.2	02-02647-1- α	W	X							☐
	MW-13	CRVI/Perch	02-02647-1- β	W		X		X				☐
3	MW-16	524.2	02-02647-2- α	W	X							☐

Sample Receiving Checklist

APCL ServiceID: **2625**Client Name/Project: Sota

1. Sample Arrival

Date/Time Received 4/25/02 1710Date/Time Opened 4/25/02 1710By (name): KmyCustody Transfer: ☐ Client☐ Golden State☐ UPS☐ US Mail☐ FedEx☒ APCL Empl: Grea

2. Chain-of-Custody (CoC)

☒ With Samples?☐ Faxed?☒ Client has Copy?☐ Signed, dated? By: _____☒ Project ID?☒ Analyses Clear?☐ Hold Samples?

on Hold _____

Received 7☐ CoC/Docs Zip-Locked under lid?☐ Compos. #: _____☒ #Samples OK?☐ Discrepancies?☐ Client notified?☐ Response (attach docs): _____

3. Shipping Container/Cooler

☒ Cooler Used? # of 1

Cooled by:

☒ Ice☐ Blue Ice☐ Dry Ice☐ NoneTemp °C 4.3

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal?

☐ Absent☐ Intact☐ Tampered?

4. Sample Preservation

☐ pH <2☐ pH >12

If Not, pH = _____

Preserved by:

☐ Client☐ APCL☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr☐ BACT 6/24hr☒ Cr^{VI} 24hr☐ NO₃⁻ 48hr☐ BOD 48hr☐ Cl₂ ASAP☐ Turbidity 48hr☐ DO ASAP☐ Fe(II) ASAP☐ HT Expired?☐ Client notified?

6. Sample Container Condition

☒ Intact?☐ Broken?☐ Documented?

Number: _____

Type:

☒ plastic☒ glass☐ Tube: brass/SS☐ Tedlar Bag☒ Quantity OK?☐ Leaking?☐ Anomaly?☒ Caps tight?☐ Air Bubbles?☐ Anomaly?

Labels:

☒ Unique ID?☐ Date/Time☐ Preserved?

7. Turn Around Time

☒ RUSH TAT: 5 days☐ Std (7-10 days)☐ Not Marked

8. Sample Matrix

☐ Drinking H₂O☒ Other Liq☐ Soil☐ Wipe☐ Polymer☐ Air☐ Other: _____☐ Ground H₂O☐ Sludge☐ Filter☐ Oil/Petro☐ Paint☐ W. Water☐ Extract☐ Unknown

9. Pre-Login Check List Completed & OK?

☒ ALL OK? (if not, attach docs)☐ Client Contact? (Name: _____) Date/Time: _____Received/Checked by: Kmy

Date: 25 Apr 2002

Time: 7:40 a.m.

* HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List *3rd*

02-02625 (1288_ 351) (4858100_ 351)

04/26/02

Part 1: General Information

☐ Company Information	Name:	<i>SOTA Environmental</i>
	Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
☐ Project Information	Project Description:	<i>JPL</i>
	Project #:	<i>00HW019</i>
☐ Billing Information	P.O. #:	
	Bill Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
	Lab Project ID:	<i>2002.0002</i>
	Client Database #:	<i>01</i>
☐ Receiving Information	Who Received Sample?	<i>Kenny</i>
	Receiving Date/Time:	<i>04/25/02 1710</i>
	COC No.	
☐ Shipping Information	Shipping Company	<i>APCL pick up</i>
	Packing Information:	<i>Cooler/Ice Chester</i>
	Cooler Temperature:	<i>4.3 °C</i>
☐ Container Information	Container Provider:	<i>Client</i>
☐ Sampling Information	Sampling Person:	
	Sampling Company:	<i>Client</i>
☐ Turn-Around-Time Option:		<i>Rush 5 working day(s)</i>
☐ QC Option:		<i>NEESA D</i>
☐ Disposal Option:		<i>Not specify</i>

64903

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont- tainer	Preser- vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days
1	TB-4	524.2	02-02625-7	W	V	C	40	2	G	042502	N	0	7 ☐
2	MW-4-5	CRVI/Perch	02-02625-6	W	P		500	1	G	042502	N	0	7 ☐
3	MW-4-4	524.2	02-02625-5- α	W	V	C	40	0	G	042502	N	0	7 ☐
	MW-4-4	CRVI/Perch	02-02625-5- β	W	P		500	1	G	042502	N	0	7 ☐
4	MW-4-3	524.2	02-02625-4- α	W	V	C	40	3	G	042502	N	0	7 ☐
	MW-4-3	CRVI/Perch	02-02625-4- β	W	P		500	1	G	042502	N	0	7 ☐
5	MW-4-2	524.2	02-02625-3- α	W	V	C	40	3	G	042502	N	0	7 ☐
	MW-4-2	CRVI/Perch	02-02625-3- β	W	P		500	1	G	042502	N	0	7 ☐
6	MW-4-1	524.2	02-02625-2- α	W	V	C	40	3	G	042502	N	0	7 ☐
	MW-4-1	CRVI/Perch	02-02625-2- β	W	P		500	1	G	042502	N	0	7 ☐
7	ER-4	524.2	02-02625-1- α	W	V	C	40	3	G	042502	N	0	7 ☐
	ER-4	CRVI/Perch	02-02625-1- β	W	P		500	1	G	042502	N	0	7 ☐

Part 3: Analysis Information

Test Items:	☐ 524.2	Volatile Organic Compounds
	☐ 7196	Chromium (VI)
	☐ 300.0	Perchlorate, low level
	☐ 200.7/6010	Sodium, Na, by ICP
	☐ 200.7/6010	Potassium, K, by ICP
	☐ 200.7/6010	Calcium, Ca, by ICP
	☐ 200.7/6010	Magnesium, Mg, by ICP
	☐ 200.7/6010	Iron, Fe, by ICP
	☐ 300.0	Sulfate (SO_4^{--}), by IC
	☐ 300.0/SM4500NOM	Nitrate (NO_3^-) as N by IC
	☐ 300.0	Chloride Cl^- by IC
	☐ SM2320B	Carbonate
	☐ SM2320B	Bicarbonate
	☐ 9040/150.1	pH
	☐ 160.1	Solids, Total Dissolved (TDS)
	☐ 206.2/7060	Arsenic, As, by GFAA
	☐ 310.1	Alkalinity
	☐ PAH-SIM	PAH (NOAA)

Seq. Client's Sample ID Sample APCL

#	(as given on COC)	Sub-ID	Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE
1	TB-4	524.2	02-02625-7	W	X							☐
2	MW-4-5	CRVI/Perch	02-02625-6	W		X						☐
3	MW-4-4	524.2	02-02625-5- α	W								☐
	MW-4-4	CRVI/Perch	02-02625-5- β	W		X						☐
4	MW-4-3	524.2	02-02625-4- α	W	X							☐
	MW-4-3	CRVI/Perch	02-02625-4- β	W		X	X					☐
5	MW-4-2	524.2	02-02625-3- α	W	X							☐
	MW-4-2	CRVI/Perch	02-02625-3- β	W		X	X					☐
6	MW-4-1	524.2	02-02625-2- α	W	X							☐
	MW-4-1	CRVI/Perch	02-02625-2- β	W		X	X					☐
7	ER-4	524.2	02-02625-1- α	W	X							☐
	ER-4	CRVI/Perch	02-02625-1- β	W		X	X					☐

Seq.	Client's Sample ID	Sample	APCL									
#	(as given on COC)	Sub-ID	Sample ID	Matrix	SO4	NO3	CL	CARBONATE	BICARBON	PH	TDS	AS
1	TB-4	524.2	02-02625-7	W								☐
2	MW-4-5	CRVI/Perch	02-02625-6	W								☐
3	MW-4-4	524.2	02-02625-5- α	W								☐
	MW-4-4	CRVI/Perch	02-02625-5- β	W								☐
4	MW-4-3	524.2	02-02625-4- α	W								☐
	MW-4-3	CRVI/Perch	02-02625-4- β	W								☐
5	MW-4-2	524.2	02-02625-3- α	W								☐
	MW-4-2	CRVI/Perch	02-02625-3- β	W								☐
6	MW-4-1	524.2	02-02625-2- α	W								☐
	MW-4-1	CRVI/Perch	02-02625-2- β	W								☐
7	ER-4	524.2	02-02625-1- α	W								☐
	ER-4	CRVI/Perch	02-02625-1- β	W								☐

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM
1	TB-4	524.2	02-02625-7	W		☐
2	MW-4-5	CRVI/Perch	02-02625-6	W		☐
3	MW-4-4	524.2	02-02625-5- α	W		☐
	MW-4-4	CRVI/Perch	02-02625-5- β	W		☐
4	MW-4-3	524.2	02-02625-4- α	W		☐
	MW-4-3	CRVI/Perch	02-02625-4- β	W		☐
5	MW-4-2	524.2	02-02625-3- α	W		☐
	MW-4-2	CRVI/Perch	02-02625-3- β	W		☐
6	MW-4-1	524.2	02-02625-2- α	W		☐
	MW-4-1	CRVI/Perch	02-02625-2- β	W		☐
7	ER-4	524.2	02-02625-1- α	W		☐
	ER-4	CRVI/Perch	02-02625-1- β	W		☐



A P C L

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel. (909) 590-1828 Fax (909) 590-1498

April 29, 2002

SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Suite 212
San Diego CA 92127

Dear Yu,

This package contains samples in our Service ID 02-2506 and your project is 00HW019 JPL.
Enclosed please find:

- (1) One original report.
- (2) One original Chain of Custody.
- (3) One diskette containing EDD Deliverable.
- (4) One original of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,

QA/QC Director

Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:

SOTA Environmental

Attention: Yu Zeng

16835 W. Bernardo Dr, Ste. 212

San Diego CA 92127

Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-022506

Received: 04/19/02

Collected by: JNT/TAM

Extracted: N/A

Collected on: 04/19/02

Tested: 04/19-23/02

Reported: 04/24/02

Sample Description: Water from Pasadena, CA

Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result		
				ER-11	MW-11-1	MW-11-2
				02-02506-1	02-02506-2	02-02506-3
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	< 4	< 4	< 4
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
CHLOROFORM	524.2	µg/L	0.5	< 0.5	< 0.5	1
1,1-DICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	524.2	µg/L	1	0.3J	0.3J	0.4J
TETRACHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
TRICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-11-3	MW-11-4	TB-11
				02-02506-4	02-02506-5	02-02506-6
Dilution Factor				1	1	1
PERCHLORATE	E314	µg/L	4	< 4	< 4	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
CHLOROFORM	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
TRICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result			
				ER-11	MW-11-1	MW-11-2	MW-11-3
				02-02506-1	02-02506-2	02-02506-3	02-02506-4
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01

PQL: Practical Quantitation Limit.

MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

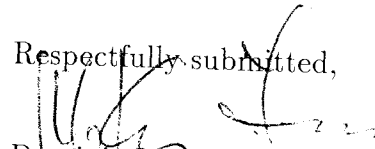
N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,


Dominic Lau

Laboratory Director

Applied P & Ch Laboratory

Case Narrative

Project: JPL/00HW019

For SOTA Environmental

APCL Service No: 02-2506

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
TB-11	02-02506-6
MW-11-4	02-02506-5
MW-11-3	02-02506-4
MW-11-2	02-02506-3
MW-11-1	02-02506-2
ER-11	02-02506-1

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),

7196 (Chromium (VI)),

E314 (Perchlorate, low level),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None.

6. Anomaly

None.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,


Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chain of Custody

Please Print in pen Page 1 of 1

Client: **SOTA ENVR. TECH INC.** Contact: **MIKE SAYRE** Tel #: **858-495-8100** Fax #: **858-495-0812**
Address: **16835 WEST BERNARDO DRIVE #212** City: **SAN DIEGO** State: **CA** Zip code: **92127**
Bill to: **SOTA**

Project Name/Code: **JPL** Job # **00HW019** P.O. #
Project Address: **PASADENA, CALIFORNIA** APCL Quotation #
Due Date: ☒ Regular ☐ Rush: days hours Sampled by: **JNT/TAM**

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis	Items	White - With report Yellow - Lab copy Pink - Originator	Remarks
TB-11	TRIP BLANK	4/19/02 0949	WATER	HCL	2	NOCS (524.2)			LEVEL IV
MW-11-4	MW-11-4			HCL	3	LOT Cr (200.8)			DATA PACKAGE
MW-11-4	MW-11-4				1	PERCUTANATE (34.0)			
MW-11-3	MW-11-3			HCL	9				MS/MSD
MW-11-3	MW-11-3			HN03	2				MS/MSD
MW-11-3	MW-11-3				2				MS/MSD
MW-11-2	MW-11-2			HCL	3				
MW-11-2	MW-11-2			HN03	1				
MW-11-2	MW-11-2				1				
MW-11-1	MW-11-1			HCL	3				
MW-11-1	MW-11-1			HN03	1				
MW-11-1	MW-11-1				1				
ER-11	ER-11 EQUIP. RINSATE			HCL	3				
ER-11	EQUIP. RINSATE			HN03	1				
ER-11	EQUIP. RINSATE				1				

2506

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ☐ (E, C or D); ☐ Other ☐ (Please specify)
Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for days after receiving date. If not specified, samples will be discarded 45 days after samples are received.
Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # Temperature: ☐ Room ☐ Cold (°C).

Relinquished by Li Hoke Date/Time 4/19/02 1345 Received by [Signature] Date/Time 4/19/02 1345
Relinquished by Date/Time Received by Date/Time

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.
APCL Form 4-101, Ver. 4.0, Dec. 20, 1994.

Sample Receiving Checklist

APCL ServiceID: **2506**Client Name/Project: Sota Environmental

1. Sample Arrival

Date/Time Received 4/19/02 1345Date/Time Opened 4/19/02 1345By (name): KennyCustody Transfer: ☒ Client☐ Golden State☐ UPS☐ US Mail☐ FedEx☐ APCL Empl: _____

2. Chain-of-Custody (CoC)

☒ With Samples?☐ Faxed?☒ Client has Copy?☐ Signed, dated? By: _____☒ Project ID?☒ Analyses Clear?☐ Hold Samples?

on Hold _____

Received 6☒ CoC/Docs Zip-Locked under lid?☐ Compos. #: _____☒ #Samples OK? _____☐ Discrepancies?☐ Client notified?☐ Response (attach docs): _____

3. Shipping Container/Cooler

☒ Cooler Used? # of 1

Cooled by:

☒ Ice☐ Blue Ice☐ Dry Ice☐ NoneTemp °C 41

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal?

☐ Absent☐ Intact☐ Tampered?

4. Sample Preservation

☒ pH < 2☐ pH > 12

If Not, pH = _____

Preserved by:

☐ Client☒ APCL☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr☐ BACT 6/24hr☒ Cr^{VI} 24hr☐ NO₃⁻ 48hr☐ BOD 48hr☐ Cl₂ ASAP☐ Turbidity 48hr☐ DO ASAP☐ Fe(II) ASAP☐ HT Expired?☐ Client notified?

6. Sample Container Condition

☒ Intact?☐ Broken?☐ Documented?

Number: _____

Type:

☒ plastic☒ glass☐ Tube: brass/SS☐ Tedlar Bag☒ Quantity OK?☐ Leaking?☐ Anomaly?☒ Caps tight?☐ Air Bubbles?☐ Anomaly?

Labels:

☒ Unique ID?☐ Date/Time☐ Preserved?

7. Turn Around Time

☒ RUSH TAT: 5 days☐ Std (7-10 days)☐ Not Marked

8. Sample Matrix

☐ Drinking H₂O☒ Other Liq☐ Soil☐ Wipe☐ Polymer☐ Air☐ Other: _____☐ Ground H₂O☐ Sludge☐ Filter☐ Oil/Petro☐ Paint☐ W. Water☐ Extract☐ Unknown

9. Pre-Login Check List Completed & OK?

☒ ALL OK? (if not, attach docs)☐ Client Contact?

(Name: _____)

Date/Time: _____

Received/Checked by: Kenny

Date: 19 Apr 2002

Time: 7:47 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

02-02506 (1288_ 347) (4858100_ 347)

04/19/02

Part 1: General Information

☐ Company Information	Name:	<i>SOTA Environmental</i>
	Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
☐ Project Information	Project Description:	<i>JPL</i>
	Project #:	<i>00HW019</i>
☐ Billing Information	P.O. #:	
	Bill Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
	Lab Project ID:	<i>2002.0002</i>
	Client Database #:	<i>01</i>
☐ Receiving Information	Who Received Sample?	<i>Kenny</i>
	Receiving Date/Time:	<i>04/19/02 1345</i>
	COC No.	
☐ Shipping Information	Shipping Company	<i>by Client</i>
	Packing Information:	<i>Cooler/Ice Chester</i>
	Cooler Temperature:	<i>4.1 °C</i>
☐ Container Information	Container Provider:	<i>Client</i>
☐ Sampling Information	Sampling Person:	<i>JNT/TAM</i>
	Sampling Company:	<i>Client</i>
☐ Turn-Around-Time Option:		<i>Rush 5 working day(s)</i>
☐ QC Option:		<i>NEESA D</i>
☐ Disposal Option:		<i>Not specify</i>

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont- tainer	Preser- vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days
1	TB-11 ✓	524.2	02-02506-6	W	V	C	40	2	G	041902	N	0	7 ☐
2	MW-11-4 ✓	524.2	02-02506-5- α	W	V	C	40	3	G	041902	N	0	7 ☐
	MW-11-4	Perch	02-02506-5- β	W	P		500	1	G	041902	N	0	7 ☐
3	MW-11-3 ✓	524.2	02-02506-4- α	W	V	C	40	9	G	041902	N	0	7 ☐
	MW-11-3	CRVI/Perch	02-02506-4- β	W	P		500	2	G	041902	N	0	7 ☐
4	MW-11-2 ✓	524.2	02-02506-3- α	W	V	C	40	3	G	041902	N	0	7 ☐
	MW-11-2	CRVI/Perch	02-02506-3- β	W	P		500	1	G	041902	N	0	7 ☐
5	MW-11-1 ✓	524.2	02-02506-2- α	W	V	C	40	3	G	041902	N	0	7 ☐
	MW-11-1	CRVI/Perch	02-02506-2- β	W	P		500	1	G	041902	N	0	7 ☐
6	ER-11 ✓	524.2	02-02506-1- α	W	V	C	40	3	G	041902	N	0	7 ☐
	ER-11	CRVI/Perch	02-02506-1- β	W	P		500	1	G	041902	N	0	7 ☐

Part 3: Analysis Information

Test Items:	☒ 524.2	Volatile Organic Compounds
	☒ 7196	Chromium (VI)
	☒ 300.0	Perchlorate, low level
	☐ 200.7/6010	Sodium, Na, by ICP
	☐ 200.7/6010	Potassium, K, by ICP
	☐ 200.7/6010	Calcium, Ca, by ICP
	☐ 200.7/6010	Magnesium, Mg, by ICP
	☐ 200.7/6010	Iron, Fe, by ICP
	☐ 300.0	Sulfate (SO_4^{--}), by IC
	☐ 300.0/SM4500NO $_3$	Nitrate (NO_3^-) as N by IC
	☐ 300.0	Chloride Cl^- by IC
	☐ SM2320B	Carbonate
	☐ SM2320B	Bicarbonate
	☐ 9040/150.1	pH
	☐ 160.1	Solids, Total Dissolved (TDS)
	☐ 206.2/7060	Arsenic, As, by GFAA
	☐ 310.1	Alkalinity
	☐ PAH-SIM	PAH (NOAA)

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE
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100

Login By En-Yu Paul Kou

Check By 



A P C L

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel. (909) 590-1828 Fax (909) 590-1498

April 24, 2002

SOTA Environmental
Attention: Yu Zeng
16835 W. Bernardo Dr. Suite 212
San Diego CA 92127

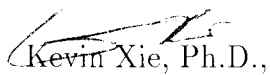
Dear Yu,

This package contains samples in our Service ID 02-2385 and your project is 00HW019 JPL.
Enclosed please find:

- (1) One original report.
- (2) One original Chain of Custody.
- (3) One diskette containing EDD Deliverable.
- (4) One original of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,


Kevin Xie, Ph.D.,

QA/QC Director

Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:

SOTA Environmental

Attention: Yu Zeng

16835 W. Bernardo Dr, Ste. 212

San Diego CA 92127

Tel: (858)485-8100 Fax: (858)485-0812

Service ID #: 801-022385

Collected by: MES/TAM

Collected on: 04/11/02

Received: 04/11/02

Extracted: N/A

Tested: 04/12-16/02

Reported: 04/17/02

Sample Description: Water from Pasadena, CA

Project Description: 00HW019 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result			
				ER-12	MW-12-1	MW-12-2	MW-12-3
				02-02385-1	02-02385-2	02-02385-3	02-02385-4
Dilution Factor				1	1	1	1
PERCHLORATE	E314	µg/L	4	<4	<4	<4	<4
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	0.4J	4.6
CHLOROFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	2.3
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	0.5J	0.5J	0.5J	0.5J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	0.3J
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

Component Analyzed	Method	Unit	PQL	Analysis Result			
				MW-12-4	MW-12-5	MW-12-3D	TB-12
				02-02385-5	02-02385-6	02-02385-7	02-02385-8
Dilution Factor				1	1	1	1
PERCHLORATE	E314	µg/L	4	<4	<4	<4	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
CARBON TETRACHLORIDE	524.2	µg/L	0.5	3.5	0.8	2.9	<0.5
CHLOROFORM	524.2	µg/L	0.5	1.2	0.3J	1.9	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	1	0.5J	0.4J	0.5J	0.9J
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	0.6	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result	
				ER-12 02-02385-1	MW-12-1 02-02385-2
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-12-2 02-02385-3	MW-12-3 02-02385-4	MW-12-3D 02-02385-7
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,



Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Case Narrative

Project: JPL/Pasadena, CA/00HW019

For SOTA Environmental

APCL Service No: 02-2385

1. Sample Identification

The sample identifications are listed in the following table:

SOTA Environmental Sample ID	APCL Sample ID
MW-12-5	02-02385-6
MW-12-4	02-02385-5
ER-12	02-02385-1
MW-12-3	02-02385-4
MW-12-3D	02-02385-7
TB-12	02-02385-8
MW-12-2	02-02385-3
MW-12-1	02-02385-2

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),

7196 (Chromium (VI)),

E314 (Perchlorate, low level),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None.

6. Anomaly

(1) SW8260B:

Methylene Chloride was detected in the Method Blank in the amount of 1.9 $\mu\text{g/L}$, exceeding 1 $\mu\text{g/L}$ reporting limit. However only traces of Methylene Chloride in the amount of 0.5-0.9 $\mu\text{g/L}$ were detected in the field samples, due to lab contamination.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,


Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL

Chain of Custody

Please Print in pen Page 1 of 2

Client: SOTA ENV. TECH. INC. Contact: MIKE SAYRE

Tel #: 858-485-8100 Fax #: 858-485-0812

Address: 16835 WEST BERNARDO DR. STE 212 City: SAN DIEGO

State: CA Zip code: 92127

Bill to: SOTA

Project Name/Code: JPL Job # 00HW019 P.O. #

Project Address: PASADENA CALIFORNIA APCL Quotation #

Due Date: ☒ Regular ☐ Rush: ___ days ___ hours Sampled by: MGS/TAM

Field Sample ID No.	Sample Description	Date Collected	Sample Matrix	Preservation	# of Containers	Analysis Items	Remarks
MW-12-5	MW-12-5	4-11-02	WATER	HCl	3	VOCs (5242) ☒ Perchlorate ☒ Tot Cr ☒ Cr (VI) 7196	LEVEL IV
MW-12-5	MW-12-5	1057			1		
MW-12-4	MW-12-4	1126		HCl	3		
MW-12-4	MW-12-4	1125			1		
ER-12	EQUIP. RINSATE	1210		HCl	3		
ER-12	EQUIP. RINSATE	1210		HNO3	1		
ER-12	EQUIP. RINSATE	1210			1		
MW-12-3	MW-12-3	1157		HCl	3		
MW-12-3	MW-12-3	1157		HNO3	1		
MW-12-3	MW-12-3	1157			1		
MW-12-3D	MW-12-3DUPPLICATES	1157		HCl	3		
MW-12-3D	MW-12-3DUPPLICATES	1219		HNO3	1		
MW-12-3D	MW-12-3DUPPLICATES	1219			1		
TB-12	TRIP BLANK	1015		HCl	2		

2385

QC Requirement: ☐ Regular; ☐ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☐ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other ___ (Please specify)

Sample Disposal: ☐ Return ☐ Disposal by APCL ☐ Hold for ___ days after receiving date. If not specified, samples will be discarded 45 days after samples are received.

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # ___ Temperature: ☐ Room ☐ Cold (___ °C).

Relinquished by *[Signature]* Date/Time 4/11/02 1537 Received by *[Signature]* Date/Time 4/11/02 1337

Relinquished by *[Signature]* Date/Time 4/11/02 1710 Received by *[Signature]* Date/Time 4/11/02 1710

APCL USE ONLY Service #

Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.



File:(CUST.DAT\LAB\CH\IN4.TEX

Sample Receiving Checklist

APCL ServiceID: **2385** Client Name/Project: Sota Environmental

1. Sample Arrival

Date/Time Received 4/11/02 1710 Date/Time Opened 4/11/02 1710 By (name): Kuy
Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☒ APCL Empl: Greg

2. Chain-of-Custody (CoC)

☒ With Samples? ☐ Faxed? ☒ Client has Copy? ☐ Signed, dated? By: _____
☒ Project ID? ☐ Analyses Clear? ☐ Hold Samples? # on Hold _____ # Received 8
☒ CoC/Docs Zip-Locked under lid? ☐ Compos. #: _____ ☒ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☒ Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 2.6
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12
If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☒ Cr^{VI} 24hr ☐ NO₃⁻ 48hr ☐ BOD 48hr
☐ Cl₂ ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☒ Intact? ☐ Broken? ☐ Documented? Number: _____
Type: ☒ plastic ☒ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☒ Quantity OK? ☐ Leaking? ☐ Anomaly?
☒ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☒ Unique ID? ☐ Date/Time ☐ Preserved?

7. Turn Around Time

☒ RUSH TAT: 5 day ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H₂O ☒ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☐ Ground H₂O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☒ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: _____) Date/Time: _____Received/Checked by: Pam Date: 11 Apr 2002 Time: 8:15 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

02-02385 (1288_ 341) (4858100_ 341)

04/12/02

Part 1: General Information

☐	Company Information	Name:	<i>SOTA Environmental</i>
		Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
☐	Project Information	Project Description:	<i>JPL</i>
		Project #:	<i>00HW019</i>
☐	Billing Information	P.O. #:	
		Bill Address:	<i>16835 W. Bernardo Dr, Ste. 212 ,San Diego ,CA 92127</i>
		Lab Project ID:	<i>2002-0002</i>
		Client Database #:	<i>01</i>
☐	Receiving Information	Who Received Sample?	<i>Kenny</i>
		Receiving Date/Time:	<i>04/11/02 1710</i>
		COC No.	
☐	Shipping Information	Shipping Company	<i>APCL pick up</i>
		Packing Information:	<i>Cooler/Ice Chester</i>
		Cooler Temperature:	<i>2.6 °C</i>
☐	Container Information	Container Provider:	<i>Client</i>
☐	Sampling Information	Sampling Person:	<i>MES/TAM</i>
		Sampling Company:	<i>Client</i>
☐	Turn-Around-Time Option:		<i>Rush 5 working day(s)</i>
☐	QC Option:		<i>NEESA D</i>
☐	Disposal Option:		<i>Not specify</i>

060303

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont- tainer	Preser- vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days
1	MW-12-5	524.2	02-02385-6- α	W	V	C	40	3	G	041102	N	0	7 ☐
	MW-12-5	Perch	02-02385-6- β	W	P		500	1	G	041102	N	0	7 ☐
2	MW-12-4	524.2	02-02385-5- α	W	V	C	40	3	G	041102	N	0	7 ☐
	MW-12-4	Perch	02-02385-5- β	W	P		500	1	G	041102	N	0	7 ☐
3	ER-12	524.2	02-02385-1- α	W	V	C	40	3	G	041102	N	0	7 ☐
	ER-12	CRVI/Perch	02-02385-1- β	W	P		500	1	G	041102	N	0	7 ☐
4	MW-12-3	524.2	02-02385-4- α	W	V	C	40	3	G	041102	N	0	7 ☐
	MW-12-3	CRVI/Perch	02-02385-4- β	W	P		500	1	G	041102	N	0	7 ☐
5	MW-12-3D	524.2	02-02385-7- α	W	V	C	40	3	G	041102	N	0	7 ☐
	MW-12-3D	CRVI/Perch	02-02385-7- β	W	P		500	1	G	041102	N	0	7 ☐
6	TB-12	524.2	02-02385-8	W	V	C	40	2	G	041102	N	0	7 ☐
7	MW-12-2	524.2	02-02385-3- α	W	V	C	40	3	G	041102	N	0	7 ☐
	MW-12-2	CRVI/Perch	02-02385-3- β	W	P		500	1	G	041102	N	0	7 ☐
8	MW-12-1	524.2	02-02385-2- α	W	V	C	40	3	G	041102	N	0	7 ☐
	MW-12-1	CRVI/Perch	02-02385-2- β	W	P		500	1	G	041102	N	0	7 ☐

Part 3: Analysis Information

Test Items:

- ☒ 524.2 Volatile Organic Compounds
- ☐ 7196 Chromium (VI)
- ☐ 300.0 Perchlorate, low level
- ☐ 200.7/6010 Sodium, Na, by ICP
- ☐ 200.7/6010 Potassium, K, by ICP
- ☐ 200.7/6010 Calcium, Ca, by ICP
- ☐ 200.7/6010 Magnesium, Mg, by ICP
- ☐ 200.7/6010 Iron, Fe, by ICP
- ☐ 300.0 Sulfate (SO_4^{--}), by IC
- ☐ 300.0/SM4500NO $_3$ Nitrate (NO_3^-) as N by IC
- ☐ 300.0 Chloride Cl^- by IC
- ☐ SM2320B Carbonate
- ☐ SM2320B Bicarbonate
- ☐ 9040/150.1 pH
- ☐ 160.1 Solids, Total Dissolved (TDS)
- ☐ 206.2/7060 Arsenic, As, by GFAA
- ☐ 310.1 Alkalinity

☐ PAH-SIM

PAH (NOAA)

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCHL	NA	K	CA	MG	FE
1	MW-12-5	524.2	02-02385-6- α	W	X							☐
	MW-12-5	Perch	02-02385-6- β	W			X					☐
2	MW-12-4	524.2	02-02385-5- α	W	X							☐
	MW-12-4	Perch	02-02385-5- β	W			X					☐
3	ER-12	524.2	02-02385-1- α	W	X							☐
	ER-12	CRVI/Perch	02-02385-1- β	W		X	X					☐
4	MW-12-3	524.2	02-02385-4- α	W	X							☐
	MW-12-3	CRVI/Perch	02-02385-4- β	W		X	X					☐
5	MW-12-3D	524.2	02-02385-7- α	W	X							☐
	MW-12-3D	CRVI/Perch	02-02385-7- β	W		X	X					☐
6	TB-12	524.2	02-02385-8	W	X							☐
7	MW-12-2	524.2	02-02385-3- α	W	X							☐
	MW-12-2	CRVI/Perch	02-02385-3- β	W		X	X					☐
8	MW-12-1	524.2	02-02385-2- α	W	X							☐
	MW-12-1	CRVI/Perch	02-02385-2- β	W		X	X					☐

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	SO4	NO3	CL	CARBONATE	BICARBON	PH	TDS	AS
1	MW-12-5	524.2	02-02385-6- α	W								☐
	MW-12-5	Perch	02-02385-6- β	W								☐
2	MW-12-4	524.2	02-02385-5- α	W								☐
	MW-12-4	Perch	02-02385-5- β	W								☐
3	ER-12	524.2	02-02385-1- α	W								☐
	ER-12	CRVI/Perch	02-02385-1- β	W								☐
4	MW-12-3	524.2	02-02385-4- α	W								☐
	MW-12-3	CRVI/Perch	02-02385-4- β	W								☐
5	MW-12-3D	524.2	02-02385-7- α	W								☐
	MW-12-3D	CRVI/Perch	02-02385-7- β	W								☐
6	TB-12	524.2	02-02385-8	W								☐
7	MW-12-2	524.2	02-02385-3- α	W								☐
	MW-12-2	CRVI/Perch	02-02385-3- β	W								☐
8	MW-12-1	524.2	02-02385-2- α	W								☐
	MW-12-1	CRVI/Perch	02-02385-2- β	W								☐

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	ALKALIN	SIM
1	MW-12-5	524.2	02-02385-6- α	W		☐
	MW-12-5	Perch	02-02385-6- β	W		☐
2	MW-12-4	524.2	02-02385-5- α	W		☐
	MW-12-4	Perch	02-02385-5- β	W		☐

